

ANALYTIC—SYNTHETIC

VI

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It should be obvious that this story misses the point.¹ What has gone wrong? Suppose I say that if fleas are smaller than camels, camels must be larger than fleas—am I really merely recording *how people use* the expressions 'smaller than', 'larger than' and following their use? I may and I may not be. Suppose that this sentence was printed in a book for learning English, then I might use it to learn the sense of these two expressions. But surely this is not the sort of situation a philosopher has in mind when he is worried about the status of necessary propositions. Is not the point rather this—that once I *have* acquired the use of these expressions and understand what they mean, I cannot help acknowledging that the antecedent entails the consequent? Suppose a child who, let us say, is already familiar with these phrases is asked, "A camel is larger than a horse; now would you say that a horse is larger or smaller, than a camel?", he will reply, "Don't be absurd—*of course* it's smaller." The 'of course' is here pertinent, it brings out that he has *seen the point* of the argument. Those words *have* already a meaning for him, and it is in virtue of this meaning that he recognises the necessary truth. When you say, "A is larger than B, so *of course* B is smaller than A", the 'of course' is not a mere embellishment of speech, it answers to a click of comprehension—it betrays that you have grasped the relation between 'larger than' and 'smaller than', not that you have noticed or picked up certain language habits. There is a force in the argument. To make the point still clearer, let me contrast this case with the following one. Suppose that a child has learnt to form the plural of a noun by adding -s to the singular as in *boot*, *boots*, or *root*, *roots*; when he first comes across the word *foot* he forms, by analogy, the plural *foots*. You may then put him right; in teaching him that one says *feet* you are stating a fact which, as such, has nothing to do with insight. English, for all we know, may well have developed along lines so that such a 'childish mistake' would have become the correct form; why shouldn't it? There is nothing *rational* about it, any more than that *cum* in Latin takes the ablative and not e.g., the genitive; whereas when you say If "A is larger than B, B *must* be smaller

¹ c/f ANALYSIS, Vol. 13, pp. 1-14

than A" there *is* something rational about it—and it is precisely this which makes you say that you have grasped the point. If this was not so, things would be very queer indeed. Suppose, for instance, that a person, though he is perfectly aware of the use of those two expressions, yet refused to follow it and insisted instead that two things A and B may both be larger than one another—what then? Surely, if he has *only* to learn a use and no more he is free to depart from it? Yet we would not treat this departure as we would treat that of a child, namely as childish error, nor as we treat the departure of a Lichtenberg, namely as a flash of genius revealing the familiar in a sudden light, but we would soon begin to suspect that he was not quite right in his head. But why? The difference in our reaction, the applying of two so different standards would be most unfair—if Malcolm was right, if we did in fact learn necessary truths by 'the eyes and the ears'. Saying 'one foot, two foots' and saying "A and B are larger than each other" would now be exactly on a par—namely offences against the use of language. Very queer.

This brings up a further point. The appeal to the actual use of language is *not the ultimate test* we apply when we want to establish a necessary truth. Suppose the question is whether the relation 'equal', as applied to length, is transitive, and necessarily so. Imagine three rods *a*, *b*, *c*, one of silver, the other of ivory, the third of wood. For the purpose of comparison they are placed side by side in pairs, one pair of ends being adjusted till they coincide; inspection of the position of the other pair of ends will then decide whether they are equal. Suppose now that inspection shows *a* and *b* to be equal, and also *b* and *c*: does this, or does this not, entail that *a* and *c* are equal? There is a tendency to say that it does, and its supporters will have recourse to the use of language. Don't you see, they will say, that the word 'equal' is actually used in this way? But how do we know that language is *right*? Is it a sort of Supreme Court from which there is no appeal? Or is it really impossible to give a sense to a non-transitive use? What would you say, we might ask a champion of the ordinary use, if it was found that, though *a* and *b*, and *b* and *c* had the same length, namely judged by the criterion, (placing them side by side), yet *a*, when directly compared with *c*, was a bit shorter? That "there must have been some mistake somewhere"? But what if it was *always* like this? May not the mere fact of juxtaposing two rods have some unknown effect on their length—make, for instance, the silver rod shrink when brought in contact with wood? Suppose now that he replies something like this: If rods were

ever to behave in this curious sort of way, this only shows that some distorting influence was at work ; but what has this to do with their length ? The question was whether $a=b$ and $b=c$ entail $a=c$. To this the answer is Yes, no matter how queerly material rods behave. Our concern is with *spatial intervals*, not with sticks. Though there is some truth in this, it is not the whole truth. First of all, what exactly is he doing when he says this sort of thing ? He obviously wants to make the inference *independent of experience* so that he can stick to it whatever may happen to the physical rods. That is to say, he insists on using a language in which ' $a=b, b=c$, so $a=c$ ' is an *inference licence*, not an empirical statement, or again, in which this relation is adopted as a *convention*. But as a convention, emptied of content, it does not say anything about the actual world, and in particular it does not help us to infer, or predict, the results of experiments with actual rods. And this makes us see the drawback of this view—namely that it offers no guarantee that the rule adopted will be applicable. Look here, we might say to him, if we were living in a sort of Lewis Carroll world where things expand and shrink unaccountably, what will become of your rule ? You may cling to it, yes ; and you may insist that any deviation observed must be due to some distorting force, blaming physics for the discrepancy. Yet the fact remains that your rule cannot be relied on. So what is the good of having it ? Wouldn't you do better without it ?

But these are fancies, it will be said, so why care for them ? Even if they are fancies—which is not too sure—it is enough to show that the rule must answer to something in reality, have some empirical backing if it is not to be worthless. But they are not fancies. Consider this case : in making visual comparison of a number of lines, drawn parallel on a blackboard, you find that two adjacent lines are the same length, the first and the second, the second and the third, and so on. However, if the middle ground is covered up and the first is compared with the last, a difference is noticed. In this sort of situation it is tempting to say that, although two adjacent lines *appear* to be equal, they are not in reality. That is a dangerous distinction. While talking of the actual chalk marks, it makes perfectly good sense to say, "Yes, they look equal ; but let's make sure" and apply a foot-rule. But can we do the same in the case of the visual lines ? If the criterion for comparing is to be our impression the contrast of appearance and reality loses its sense ; surely in the realm of the given what appears is ? Poincaré, on a similar occasion, asks whether such an experience can be

expressed by saying $a=b$, $b=c$, $a>c$, or whether this would bring us into conflict with the law of contradiction. "As we cannot believe that two quantities equal to a third are not equal to one another", he concludes that a is different from b and b from c , but that "the imperfection of our senses" does not permit us to distinguish between them. And this, the need to avoid clashing with logic, "has compelled us to invent the mathematical continuum".¹ But all this shows is that he does not want to give up the transitive use of 'equal'; and it lands us in the same difficulty as before, namely, that it seems to make no sense to speak of "the imperfection of our senses" unless there is something—e.g. actual physical objects—against which they can be checked.

"Imperfection of the senses"—this phrase only provokes the question, What exactly would perfection be like? Can it be described? Suppose that I glance up at the night sky for a moment and am to tell how many stars I have seen; would it be right to reply "I have seen n points of light, but I don't know what number n is?" That is, must I have seen some *definite* number though I can't tell how many? (It should be noticed that this is a question of describing *what I see*, not of the number of physical stars which could be counted out on a photographic plate). Again, suppose that I look out into the rain. If I am to put into words what I see I am faced with much the same difficulty. The picture of the rain is typically blurred. Perhaps in the foreground I see a few drops (which I can even count) and then a streaky background fading away into grey. The idea of a 'perfect perception' now seems to be such that we can take in in an instant the number of light points or drops we see, and say precisely how many there are. But this is a mistake. My uncertainty is not due to my not having looked carefully enough; for however carefully I may look, or scan over the picture of rain, my impression will always remain the same. The blur is just as essential a feature of sense perception as other features are, e.g. the limitedness of the visual field; i.e. without the blur it would no longer be what it is. It would turn into something radically different, something of which we have hardly an idea, anyhow not a clear one.

If we like, we may of course speak of the 'inexactitude' of sense perception; only this inexactitude differs entirely from that exemplified (say) by "This rod is about 15 inches long". While in the latter case we can say "Let's measure and see whether it is *exactly* 15 inches long or not", there is no sense in speaking

¹ The Foundations of Science, p. 46.

of the exact number of the points of light or rain drops, just as there is no sense in speaking of a rod that is *exactly* $\sqrt{2}$ inches long. 'Inexact' is opposed to 'exact' and, like the latter, can only be used where there is some way of attaining exactitude. But that's precisely what is not possible in our case. I can take in, perhaps, five or six stars simultaneously, but not a thousand. There is no method by which they can be counted in the twinkling of an eye; and the same applies to the raindrops. Curious though it may seem, the idea of a cardinal number ceases to apply in such cases. That's why we speak of 'countlessly many' stars, hinting at the inappropriateness of counting.

The point is that sense perception is inexact in a very different sense from that in which, e.g., a painted picture, or a map, is inexact. I may say, for instance, that one map is more accurate than another map, in the sense that it is more faithful, more detailed, on a larger scale, etc. But when I say that a map is more accurate than a description given in words, the sense of 'accurate' has shifted. A verbal description is less accurate in a more fundamental sense. Consider the accuracies involved in a measurement, an estimation, the naming of a colour, in the description of a pain, or someone's face. In each of these cases, there is an accurate and an inaccurate, and, perhaps, a scale of accuracy; by discussing in each case what would constitute 'greater' or 'less accuracy' we come to see that the standards of judging differ on each level and that it would be unwise to reduce them to the same denominator. That's why it is pointless to apply the standard of mathematical accuracy ($\sqrt{2}$) to physical measurement, or the standard of physical measurement to visual experience—to the lines in my field of view. And this, I hope, also shows what is wrong with Poincaré's attempt to blame "the imperfection of our senses" for our not seeing the inequality of two adjacent lines. "Imperfection of our senses" is here used like the "blurredness of the picture of rain", namely without contrast to anything else.

Having cleared up this confusion, we may now resume the thread of the argument. The alleged difficulty was that, if we say $a=b$, $b=c$, $a>c$, we get involved in absurdities. But do we? Let us see what would go wrong if we adopted this new way of speaking. Would a contradiction ensue? By no means; all that would happen is that the word 'equal', or the symbol '=' would no longer be used transitively. On the other hand, the new idiom would have definite merits—for instance, we should no longer be driven to say, in the case considered, that the

senses 'delude' us. As a result of this, we may now be prepared to concede that the transitivity of 'equal' may be dropped, or that stating ' a and b , and b and c are equal, but a and c are not' is not in itself a contradiction, but only feels like a contradiction when the transitive use is already taken for granted. Instead, we may be disposed to say that the transitive use is very suitable when it is a question of talking of physical rods or other measurable quantities, but less suitable so far as impressions (visual, but also tactile, auditory, etc.) are concerned—a clear hint that we are *not talking the same language* when we talk about sense impressions and when we talk about physical objects.

But here an objection is likely to raise its head—are we *entitled* to speak of equality in the cases of our lines, or in similar ones? Should we not rather say of two adjacent lines that they are 'indistinguishable in length', or anything that is less committing? But why should we? Is anything wrong with that expression? If two (visual) lines are 'indistinguishable in length', they give us the impression of being equal. So why not say so—if we want to record the impression? But what one feels when one raises this sort of objection is perhaps this. One feels that the word 'equal' takes on now a slightly different sense. It is, for example, no longer certain that the three relations 'greater', 'equal', 'less' form an exhaustive disjunction. May not two lines, some distance apart, be incomparable—i.e. stand in a relation completely foreign to ordinary geometry? But this is only part of the story; for all terms, when applied to what may be called 'visual geometry', assume a somewhat different meaning. Thus it makes sense to say, in this curious, almost unexplored field, that a tiny portion of a circle is straight, that a circle and a tangent drawn to it have a small stretch in common, or again (an observation of Hume's) that two straight lines, if they converge under a very acute angle, coalesce near their meeting point, etc. What is new in this visual geometry and what has to be added to the 'ideal' geometry of mathematics, is a peculiar factor of inexactitude, or blur which it is difficult to symbolize.¹

But in all this there is no *logical* absurdity. So we can, after all, give up transitivity (which has now become rather a hindrance) and adopt a different convention—the very thing to which Poincaré takes exception. And if we do this, we can talk of visual phenomena, or other impressions in an idiom better suited to their peculiar nature.

¹ Cf. Hjelmsler, *Die naturliche Geometrie. (Anhandlungen aus dem Math. Sem. der Hamburgerischen Universität, Vol. 2, 1923).*

Now what all this shows, and this brings me back to the point, is that we are not *slaves* of the existing language. On the contrary, we are free to criticize it, discuss its merits or demerits in certain respects and *in the light of reasoning*, and then decide whether to stick to it, or else to modify or redesign its use. Take once more the use of 'equal'. Is it necessary that it should be used transitively? If 'necessary' means 'inevitable', this is not necessary; it is only necessary relative to a language which we are agreed to apply. But we can decide otherwise. The very fact that we can influence a person, can make him change his mind by force of an *argument* is sufficient proof that it is not the language *habits* on which the issue hinges.

And this makes us see the fundamental blunder committed in saying that we learn necessary truths by 'the eyes and the ears'. Whilst it is quite true that we have to learn the use of language, this does not prove that necessary truths are learned in the same way. For we may well notice "how people use expressions in certain circumstances",¹ for instance, that the relation referred to is transitive, and yet decide *against* regarding it as a necessary truth. But then it is not the use of language, nor any empirical fact discoverable by Mass Observation which settles the matter, but something else—namely insight, understanding. What is to be wondered at is that so many philosophers to-day trust in the turning of the wheels of the language machine rather than in reason, showing such a prejudice for the blind.

6. The I - and It - Aspect

In the last chapter a number of examples were given to drive home the point that language is subject to changes. But, it will be said, such changes are the concern of the literary critic and the historian of language, not of the philosopher. The latter is concerned with the *ordinary*, i.e. stock use of words and phrases. While I am not denying that this is often important, it seems to me insufficient for two reasons. First, the philosopher need not be *bound* to the actual (prevalent) use of language; I should even go further and say that he is *bound*, sooner or later, to commit the crime and depart from it—if he has something new to say, that is. In this respect, his position is not so different from that of the poet or the scientist, and for similar reasons. He too, may have come to see something which, in the ordinary way, can not quite be said. The other reason springs from an even deeper source, the misleadingness of ordinary language. When

¹ See Malcolm, *l.c.*

Lichtenberg said, "One should not say 'I think', but rather 'it thinks', just as one says 'it thunders'"; he was *of course* departing from the ordinary use, and *of course* perfectly aware of it. All right. He has done it. And in doing it he has outraged the German grammarians no less than the English, French, and the rest. Yet at the same time there is something illuminating about this saying. It is one of those rare flashes of lucidity which light up and throw into prominence a feature of our language that is deeply questionable. Like a meteor, it first startles us with its piercing paradoxicality, leaving behind it a trail of golden light; or to speak without metaphor, as the meaning gradually sinks into us, a new horizon discloses itself. Am *I* the maker of my thoughts, do they not rather occur to me, we wonder? "A man cannot say, 'I will compose poetry'. The greatest poet even cannot say it; for the mind in creation is as a fading coal, which some invisible influence, like an inconstant wind, awakens to transitory brightness." Are these words of Shelley not also true of thinking—of making mathematical discoveries, for instance, or of gaining a new insight in philosophy? There are many mathematicians who bear witness to the sudden and involuntary flashing forth of a solution at the most unexpected moments; Gauss, for instance. One morning, when he was 19 years old, before getting up, he saw clearly and distinctly that the construction of the regular polygon with 17 sides follows from one of his ideas on algebra. He did not seek for it—the discovery came 'of itself'. Poincaré, in a study on *Mathematical Creation*, narrates how one morning, walking on the cliffs, an idea came to him—the germ of a great discovery—with "the characteristics of brevity, suddenness and immediate certainty"; or how, another time, while on a geological excursion, having forgotten all about his mathematical work, at the moment when he put his foot on the step of a bus, he had a sudden illumination; he had no time to verify the idea as he was just in the middle of a conversation, but again he felt a perfect certainty. Similar experiences are reported by F. Klein. In the night which, because of asthma, he spent sitting on the sofa, almost in a state of exhaustion, there suddenly stood before his eyes a certain diagram embodying the central theorem he had been in search of without having been able to find it. In the morning he had only to write it down. It is a well-known fact that "when one works at a hard question nothing good is accomplished at the first attack. Then one takes a rest, longer or shorter, and sits down anew to the work. During the first half-hour, as before, nothing is found, and then all of a sudden

the decisive idea presents itself to the mind." (Poincaré). Such a sudden inspiration, he adds, "is only fruitful, if it is on the one hand preceded and on the other hand followed by a period of conscious work." All that lends poignancy to the question—How far am I the maker of my thoughts, and how far do they occur to me? And if they just 'occur', what is there I-ish about them? On the other hand, if there is nothing I-ish about them, why do they choose just *me* for their rendezvous?

And are Shelley's words not also true on a much lower plane? Who does not know how a forgotten name may mock us, being on the tip of the tongue, beckoning us to fill the rhythm we sense with sound, or to complete its initial letter, yet escaping us continually? Perhaps we no longer take an interest in it, we do not *want* to remember, and yet we cannot lay the ghost. Who has not been tantalized by a tune one vainly tries to put out of one's head? On the other hand, when we are groping for the right words to express something, they seem to resent it—all things resist being written down, says Kafka somewhere. In the night, when I wake up, drowsy and sleep heavy, numberless thoughts prey on me, turning me into a battlefield between their wild desire to be thought through me and my brain's longing for sleep. And this, this fantastic situation, is described by the use of the active voice, namely, by simply saying 'I think'. But who can tell how much of 'me' and how much of 'it' (or 'them') is involved in that? Thoughts, noticed Coleridge, are their own masters. True, they respond to our efforts, but only up to some point. We seem to catch sight here of a strange *intermundium*, governed jointly by the I and the It, of a sort of *condominium*. They are my thoughts, and yet they aren't.

My present point, however, is this. Lichtenberg could never have staggered us, holding out a new vision, and at the same time making us see the onesidedness of our current expressions, had he slavishly adhered to the ordinary use of language. As it is, he was not only justified in flouting the rules of grammar, but bound to do so as only in this way, by breaking through the dead crust of language, was he able to fulfil his mission. But of course not everyone is a Lichtenberg, and not everyone has to say something to surprise us out of all complacency.

It is, I think, time to distinguish between philosophers who for showing off's sake commit the sin of saying things in a stilted unsayable jargon, and those who have seen something new and in the attempt to give expression to it are driven to hammer out their own language. What lies at the root of this is something of great significance, the fact, namely, that language

is never complete for the expression of all ideas, on the contrary, that it has an essential *openness*. A philosopher, as he muses on some item or other, may notice a subtle, yet elusive difference never noticed before, but when he wants to draw attention to it language is wanting. There ought to be a word, yet there is none. To take a trivial case, you may feel a slight ambiguity in the 'nots' when you say 'It is not raining', 'If it is not raining —', 'Would it were not raining', etc. You may feel that it makes a difference whether you deny a fact, a mere possibility, or whether you use the word 'not' in the forming of a supposal, etc., and yet if you try to bring out these differences you may find yourself suffering from a sort of speech suffocation as there is only one word to mark these different shades. Again, you may sometimes feel a need for having two ways of describing a state of affairs, one for the case when you speak about something *absent*, another when you want to say something about what is just *in front* of you. And the reason for this may be your having noticed that in the second case, when you refer to something present, what you are saying is neither 'true' nor 'false' in the *same* sense as when you speak about something absent (but rather 'correct' or 'incorrect'), that you cannot possibly 'express a view', 'hold an opinion', or 'have a belief' about things which stare you in the face (though, perhaps, about 'what they mean', or how they are to be named), that you do not 'describe a fact' at all (but rather 'choose the proper words'), and that accordingly the idea of a mistake, and with it that of a statement, undergoes a parallel inflection of sense. Yet existing language denies you the possibility of stating such conceptual differences, for lack of the requisite words. One last example. Suppose an astronomer were to tell you "All planets of Algol are ring-shaped"; you would be surprised; and, perhaps, even more so if he told you that, as there are not any, his statement is perfectly true (the astronomer turning now into a logician, symbolising his statement by writing $(x): x \in pl. \supset x \in ri$). But that is a trick. What he said led you to expect that, in actual fact, there are such planets. If there are none, you feel somehow cheated. Yet to say "Algol has no planets, and all of them are ring-shaped", though it sounds very odd, is not the sort of thing we call a logical contradiction. So the latter statement, strictly speaking, does not entail that there are planets. Though it does not entail it, the relation between the two statements comes pretty *close* to that of entailment, just as the above conjunction is very *nearly* a contradiction. In such a case you may feel a strong need to have a word for denoting a relation weaker

than entailment, yet stronger than implication, or a word to express something that is *almost* a contradiction. That is the sort of situation which occurs time and again in philosophy. We become aware of some subtle difference, or of an unnamed sort of relationship, but in the attempt to impart this knowledge we are hampered by existing language, its paucity of words. Nor is this the only reason for the inadequacy of ordinary language as will be seen before long.

Wittgenstein has said something very important on this score when he pointed out (in unpublished lecture notes) that a philosopher may at times feel uneasy in ordinary language and have a longing for a novel way of expression. (The examples discussed by him are whether one should not say 'I wish a pale red for this paper' instead of 'I wish this paper were red'—as what one imagines seems to be hazier than the actuality of the paper being red; and further, whether one should not, for similar reasons, say 'This paper is not red' as the negation of 'This paper is red'. Such a mode of expression, he adds, would fulfil a certain craving of the philosopher which our ordinary language does not fulfil and which, so long as it is unfulfilled, may produce a mental cramp—which, however, is loosened when he is shown a way of expression which satisfies that need.) That is important; at the same time, I think, it strikes the wrong note: it makes it appear as if it was all a matter of *emotion*—as if a philosopher were just seized with an uncontrollable and, as his examples seem to suggest, unreasonable hankering after a new way of speaking. That is far from the truth. The real point is that we see an important difference, but cannot express it so long as we are tied to the ordinary way of expression. Seeing something in a new light is often the core of a philosophical discovery, or of a new insight. Such an insight *may* be expressible in the simplest words of language (Hume); or it may not (Lichtenberg). In the latter case, we are driven, not by a deliberate search for novelty, but by a sort of inner necessity, to find the form of expression which will bring out the point—but this is not in the least a matter of 'craving', nor of a 'mental cramp', ('discomfort') and its 'loosening'. To speak of it in such terms gives, quite unduly, the impression as if it was a question of sentiment and feeling—whereas the point is that so long as we remain within the bounds of the conventional we cannot express what we are anxious to express: a perfectly legitimate need remains unsatisfied. And there is a good reason why we are dissatisfied with existing language: it is the seeing of a new point, and the impossibility of putting it into words

which goads a philosopher on in his search for new means of expression. There is a *rational* element in it, the fight of thought with the obtuseness of speech. It is thanks to this, to the unremitting efforts of philosophers (and poets) to express the inexpressible, that language becomes an increasingly subtle instrument of thought. In what Wittgenstein said the most essential thing is left out—that breaking away from the norm is often the *only way* of making oneself understood.

Suppose that a philosopher has seen a point never seen before which, however, owing to the recalcitrance of language, cannot be expressed in the customary way, what will he do? He may cast about for some old word which has fallen into desuetude, but which, for our benefit, may be revived; failing this, he may turn to foreign languages—we are so often forced to eke out our vocabulary with terms borrowed from French, German, etc.—or to that ever-active mint for coining new expressions, popular idiom. But the supply of words for the finer purposes of thought is deficient everywhere; and, moreover, it may be that what is lacking is not the words but the grammatical forms. What will he do in this case? Well, he will, perhaps, use a peculiar mode of expression—words placed in new and strange combinations such as have never been employed before, a bold simile, or something that looks at first sight like a mishmash of different logical categories; again he may use a startling construction in which the normal bond of syntax is wilfully broken. All that is open to him. Suppose now that a philosopher, with a flair for language, hits upon a suggestive collocation of words, novel and yet instantly intelligible which expresses to a nicety what he wants to say—ought he to be ashamed of this? I think we should be grateful to him for enriching our language. 'But it is not correct.' But, hang it all, how should it be expressed if not like this? It is says what he wants to say, he is perfectly within his rights—he has achieved what he meant to achieve, and it would be silly to find fault with him. Expressiveness, not correctness, is the life and spirit of language. Philosophers are, therefore, quite justified when they, in order to bring into the focus of attention some novel point, put together words in a combination never used before. That is just one of the things that makes philosophy so exciting.

To return to Lichtenberg, when he propounded that one should say 'It thinks'—is this the ideal way of putting it? The point is that neither 'I think' nor 'It thinks' is quite apposite. The truth is somewhere between the two. Language, in constraining us to ascribe thinking to a grammatical subject,

subtly shifts the emphasis and draws a somewhat misleading picture of the true state of affairs: it creates the illusion that thinking is a doing that requires a doer. It is, and it is not. In actual fact, there is an interplay between what I do, and what comes to me. To leave no misunderstandings on this point, there are certain cases where one feels that 'I think' is the right expression—as when one says 'I will consider the matter, think it over', 'I will concentrate on the point', 'I am all attention', etc. It is right, because it is within my will-power to consider it, to think it over, generally, to pay heed to it. There are other cases where '*it* thinks' comes nearer the truth—as when a new idea 'occurs' to me, or when the solution of a problem, long sought after, suddenly and seemingly without effort flashes upon me. (Remember what mathematicians have to say on this head.) In such cases, thinking is not something planned, or controlled. Similarly, getting clear about some point in philosophy increases the rationality in the world, and yet it is not itself a rational process. But ordinarily, thinking is neither quite ascribable to my waking self—whatever that may mean—nor to a mysterious entity called 'It'. Language has not quite got the forms to express this. It cannot help making use of customary forms as precipitated in the scheme of verbal inflexion—a fact which tends to assimilate the case in question to other similar, and slightly similar ones without taking into account the differences there are. Thus the use of the first person pronoun in 'I walk', 'I take umbrage', 'I grow a beard', 'I sleep', 'I dream', 'I die', 'I suffer', 'I must', 'I ought to', 'I think' tends to make the cases appear more alike than they are; and this is perhaps unavoidable. After all, language has of necessity to make use of a limited number of forms of inflexion which are applied to all sorts of things no matter how disparate; with the result that they are pressed into the same moulds and thus present themselves in an analogous fashion. Or to change the metaphor, we trace the form of our expression and believe ourselves to follow the contour of the object; by some optical illusion we seem to see in the things what, in fact, is engraved on our spectacles. To quote Lichtenberg once more: "Our wrong philosophy is embodied in the whole of language; we cannot, so to speak, reason without reasoning wrongly. Everyone who speaks German is a philosopher of the people. Our whole philosophy is a rectification of the use of language, therefore a rectification of a philosophy, and of the commonest one. However, the common philosophy has the advantage of being in possession of declensions and conjugations. True

philosophy will, thus, always be taught with the words of the wrong one. To give verbal explanations is of no avail; for with such explanations I do not yet alter the pronouns and their declension."

Consider a bit more closely the case of a man who is writing poetry. The very expression 'to write poetry' is apt to call up the wrong sort of association—it makes it look as if, like writing a letter, it referred to an *activity*, expressed in the transitive verb 'to write'. Yet these are surface resemblances which veil a world of difference. Suppose that I have to write a letter. I may remind myself of this in the morning, thinking perhaps that I shall be free after tea to do it. At 5.30 I say to myself, "Now it's really time to write it"; I sit down, have perhaps some idea of what I want to say, and say it. And when the letter is finished it is *my* work, from the beginning to the end. But would I say, looking at my watch, 'Now it's really time to write that poem'? Perhaps—if I was a poetaster. Otherwise Shelley's warning stands; and supported by the consensus of almost all those who have ever been 'visited by the Muse', to use this hackneyed picture. (I could quote endlessly.) Poetry—'it won't come when called,—you may as well whistle for the wind,' as Byron said. Indeed a poem has a way of welling up at the most unexpected moments—when one is fatigued, just before falling asleep, while shaving, when out on a winter walk with the fingers half-frozen, while taking a bath, and so on *con dolce variazione*. In short a poem comes when *it* wills, not when I will. Varying a saw, one may say "*poema nascitur, non fit*". True, one senses, perhaps, the first stir of inspiration, but it seems to lie outside one's control. Absence of effort, receptiveness is more likely to succeed than exertion or conscious drive. Housman, in his *Name and Nature of Poetry*, confesses that the fountain would sometimes run dry in the middle of a poem so that he would have to write it himself. And this is the sort of thing that happens so often in writing poetry—the onrush of words and ideas is arrested, what came effortlessly comes haltingly, with strain and anguish, or not at all, and the words no longer have that strange luminous power they had so long as the vision lasted.

Thus a poem, when it comes, comes of itself. One often feels its approach in a curious sort of way as if something from deep down were to rise up and become word. Something as yet unknown, faceless, begins to stir, setting up vibrations in the deeper layer of one's being, as it were, and these vibrations pass to the lips in a rhythmic movement. A number of floating words

begin to solidify, and as the poet murmurs the verses over he feels a sonnet, or some other poem take shape. So long as this enchanted state lasts, he may get the poem finished; or else the impulse spends itself, the rhythm dies down: the cry is broken. The experience varies a good deal. Some poets find themselves suddenly in the grip of a particular rhythm out of which words gradually precipitate themselves, others have the impression as if some inner voice dictated the poem to them, as if they were eavesdropping rapturously on themselves, spell-bound not to miss a single word.

Related to this is the poet's impression that he is not so much the originator of the poem as its receiver. "I have been surprised at the observations made by some of my characters", we are told by Thackeray. "It seems as if an occult Power was moving the pen. The personage does or says something, and I ask, How the dickens did he come to think of that?" Keats avowed that he had often not been aware of the beauty of some thought or expression until after he had written it down; it has then struck him with astonishment and seemed rather the production of another person than his own. Writers of automatic script are often certain that they are operated by some other power. This queer impression of being worked upon from outside may be heightened to an abnormal degree. (Paul Valéry relates a case of mistaken identity when he fell a victim to a musical composition of which he could make no possible use. "Inspiration must have been guilty of a faulty choice," he observed.) Is this not the ground why so many poets disclaim authorship for their work? They feel that a poem comes unsought as a gift from the blue without any sort of effort on the part of the recipient. And this marks a further difference between writing poetry and writing a letter. In the second case, it is I who write the letter, and I am responsible for every word I use in it. In the first case, the writer is under the overwhelming impression that something 'not quite himself' has taken possession of him, and that he does not *quite* deserve praise or blame for the results.

What I want to show by making this digression into poetry is how *inadequate* language is to deal with such things. Only a few pronouns and very few forms of verbal inflexion exist in language, and none of them is quite appropriate. Thus it would not be quite true to say of a poem that *I* have been writing it, since this would assign too active a part to me, nor that it got itself written *through me* as though it was endowed with a life of its own, nor that it has been written by a mysterious third one

who was at work inside me, making use of the mechanism of my body. None of these expressions seems to fit. In order to describe such things more adequately one needs, perhaps, a language in which the boundary between 'I' and 'it' is fluid—of notions, anyhow of terms, that are less definite and held, as it were, in solution.

If it is asked whether this process, namely writing a poem, is active or passive, or predominantly active or predominantly passive, what ought one to reply? Well, consider first another case—daydreaming. Is it active or passive? Most of us, I presume, would not be able to tell straight off. Why? The state of mind referred to is such as to contain interspersed amongst itself portions that are within our will-power, and others that are not. To see what is voluntary in it, we may ask whether we can stop it, or promote it. Suppose that I indulge in such fancies, this is in part *my* doing, and in part it is not. It is not my doing insofar as I have no control over the course my daydreams take, any more than I control my dreams in the night-time; rather I am in the role of a spectator who watches, perhaps helplessly, a play going on and on that inner stage. What is unwilling is not describable as an *act*, nor ascribable to 'me' as the *subject*: it *happens* to me, I don't do it. Sometimes, e.g. in a state of deep emotion, I cannot help falling into such fancies—'I was lost in reverie' we say significantly, thus bringing out the passive aspect of the matter. Yet I am not *entirely* passive as I am in sleep, for I consciously indulge in vain fancies; true, I *might* stop them at any moment, yet I don't—'I give the reins to my imagination' as the phrase goes, i.e., I give myself up to the pleasure of building castles in the air. Insofar as I abstain from interfering a *voluntary* element is present, not to be found in a real dream, a vision, a state of trance, and the like. Thus active and passive, or better receptive, frames of mind alternate, indeed interpenetrate, in this experience; and accordingly language shows a wavering between active and passive modes of expression—'I am daydreaming', 'I am lost in dreams', 'I fall a prey to fancies', etc.

Again, when something very exciting has happened to us, we cannot shake off the memory of it—mechanically we go over the last scene, repeat the same phrases, re-live, enact the past hour time and again, moving in a circle as it were, until it becomes an obsession with us. *Are* we masters in our own house?

Such examples make us notice how artificial and doubtful the whole distinction between active and passive often is. 'To

be born', for instance, is passive, 'to come into the world' active in voice, yet both have exactly the same signification, just as 'to fall ill' is but a variant of 'to be taken ill'. Now is the 'real' sense of these idioms an active or a passive one? Or is this not a proper question to ask? What about 'falling in love'? Would you say that it is (predominantly) active, or (predominantly) passive, or neither, or that it contains components of both? What about such expressions as 'to stumble', 'to sink', 'to tremble with fear', 'to stand trial for murder', 'to despair'? Would it be sensible to ask, Could you have helped despairing? And what about hoping. Is it voluntary, something that you do? To describe it in this way would mean to apply to it predicates such as 'intentional', 'resolute', 'premeditated'—which is obviously wide of the mark; we do not hope on purpose, nor do we say 'I surprised him in the act of hoping'. Yet hoping is not something 'mechanical', 'automatic', 'instinctive' either, any more than it is something 'habitual', or a 'reflex' (whether conditioned or unconditioned). None of these dichotomies applies. You may feel here a need for a more impersonal mode of expression—e.g. 'there is hope in my heart', '*die Hoffnung keimt*' etc. Nor does the matter end here, for quite similar considerations apply e.g. to the idea of speaking. If I am very angry, for instance, I do not choose my words, any more than I choose the tone of my voice. They may, indeed, escape my lips against my will, just as I may be surprised at the hoarseness of my own voice. And yet it would be psychologically wrong to say that I am in a 'passive' frame of mind, merely. No, there is a strong impulse to action in me which may or may not, discharge itself.

(To be continued).

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ON SOME DIFFERENCES ABOUT MEANING

By NELSON GOODMAN

IN the light of many discussions of my paper "On Likeness of Meaning",¹ I want to clarify and amplify some of its main points, then (in Section II) answer briefly certain specific comments, and finally (in Section III) suggest a minor but perhaps welcome amendment.

I

The hopeless confusion of attempts to define synonymy in terms of images, concepts, possibilities, etc. leads us to seek a definition solely in terms of actual, even of physical, objects. Yet we must face the fact that some clearly non-synonymous names or predicates apply to exactly the same objects; the most striking but not the only examples are those where, as in the case of "centaur" and "unicorn", neither term applies to anything.

One main point of my earlier paper is that difference in meaning even between such terms can be explained without reference to anything but physical objects. Pictures, for example, are physical objects and yet some (indeed most) pictures of centaurs are not pictures of unicorns. In other words, while "centaur" and "unicorn" apply to exactly the same objects, "picture of a centaur" and "picture of a unicorn" do not by any means apply to exactly the same objects. This suggests that we should take into account not only what is denoted by a given term itself but also what is denoted by compounds containing that term (otherwise than in quotation marks). My proposal is that two terms are synonymous if and only if

- (a) they apply to exactly the same objects, and
- (b) each compound term constructed by combining certain words with either of the terms in question applies to exactly the same objects as the compound term constructed by combining the same words in the same way with the other of the terms in question.

This criterion recommends itself by accounting, without reference to anything but physical objects, for differences in meaning between coextensive terms. But if we can picture these differences that are not exemplified in actuality, just where does

¹ ANALYSIS, vol. 10 (1949), pp. 1-7.

the power of pictorial differentiation end? The limits of realistic or representational depiction may seem rather narrow; but as a matter of fact there is no purely representational depiction. Conventionalization to some degree is always present, and increases rather gradually from the realistic painting through the sketch, the semi-abstract picture and the ideographic sign to the word in ordinary language. The string of inscriptions that we call a description is in effect merely a highly conventionalized picture. But description, or word-picturing, is so delicate and potent an instrument that there is virtually no limit on the distinctions it can make. The difference between a man twenty feet tall and a man twenty and one one-hundredth feet tall is hard to paint but easy to state. Indeed, we can even find triangle descriptions that are not trilateral descriptions. A couple of rather clear examples are:

- (i) "plane figure of three angles and four sides"
- (ii) "triangle that is not a trilateral."

That these apply to nothing doesn't matter; centaur descriptions likewise apply to nothing. And, even if we allow ourselves to speak of possibility for the moment, it doesn't matter that these descriptions apply to nothing possible. All that matters is that despite the non-existence and even impossibility of triangles that are not trilaterals we have actually before us in (i) and (ii) *descriptions* of such triangles. "Triangle description", then, applies to some strings of inscriptions that "trilateral description" does not. Thus "triangle" and "trilateral" differ in at least one of their corresponding secondary extensions, and accordingly differ in meaning by our criterion. By similar argument, every two terms¹ will differ in meaning.

Now of course I cannot define descriptions precisely any more than I can define pictures precisely. Exact and inclusive definition of pictures of centaurs would be no less difficult than exact and inclusive definition of descriptions of triangles. But the most that is required here is that there be an appreciable number of clear cases, and that anomalous and paradoxical cases can be dealt with by reasonable rules. In the next section, I shall discuss some questions that have been raised concerning the application of "triangle description"; but there are other compound terms, having more easily specifiable ranges of application, that may equally well be used in carrying through the argument of the preceding paragraph. For example, "literal

¹ That is, every two names or predicates in a natural language like English. Restricted artificial languages can easily be so constructed that some terms will have the same meaning as others by this criterion.

English triangle word" may be taken as applying just to those inscriptions which are tokens of "triangle",¹ and "literal English trilateral word" as applying just to tokens of "trilateral". Since these corresponding compounds have different extensions, the terms "triangle" and "trilateral"—and, by similar argument, every two terms—differ in meaning.

Now I am well aware that various plausible grounds for ruling out these examples need to be considered (see Section II); but proving that every two terms differ in meaning is no part of my primary goal. The paramount problem is to deal with comparisons of meaning without reference to intensions, attitudes, or modalities. The proposed criterion in terms of primary and secondary extensions meets this requirement and yet successfully explains evident differences in meaning even between coextensive terms like "centaur" and "unicorn". In view of these virtues, I am willing to accept the apparent consequence that no two terms are synonymous. Anyone who shows that this conclusion does not follow at all, or that it can be precluded by suitable provisos, will simply render my criterion more generally acceptable. But I hold that the criterion is not, anyhow, disqualified by the result that no two terms are absolutely synonymous; for this result seems to me unfamiliar rather than intolerable. The extreme difficulty of finding in practice any two terms that surely have exactly the same meaning opens the way to acceptance of the view that there are no absolute synonyms but only terms that have a greater or lesser degree, or one or another kind, of likeness of meaning.

II

Mr. Rudner is correct in saying² that I should want any final statement of my views to be formulated in terms of a strict nominalism that regards words as actual inscriptions or events, some of which are said to be *replicas*³ of one another rather than 'tokens' of a common type. But now I think that Mr. Rudner is wrong and Mrs. Robbins⁴ right about the consequences of such a restatement. What follows is not that every two word-events differ in meaning but only that every two word-events that are not replicas of each other differ in meaning.

¹ Whereas "literal English 'triangle' term" applies to tokens of "'triangle'".

² "A Note on Likeness of Meaning", *ANALYSIS*, vol. 10 (1950), pp. 115-118.

³ See my *Structure of Appearance* (published in England by the Oxford University Press, 1951), p. 290.

⁴ "On Synonymy of Word-events", *ANALYSIS*, vol. 12 (1952), pp. 98-100.

The "wild results" that Mr. Rollins cites¹ are therefore not forthcoming. His chief objection, however, is that a definition of synonymy that makes every two terms differ in meaning departs too far from ordinary usage. *Prima facie* this is reasonable enough; but the departure from ordinary usage is less drastic and better motivated than at first appears. Suppose we have a pile of logs, some of them being for all practical purposes of the same length as others. Will Mr. Rollins reject a process of measurement that gives the result that no two of these logs are of exactly the same length? A certain conformity to ordinary usage is indeed demanded of any definition; but even where the usage is much clearer and more constant than in the case of meaning, what is commonly spoken of as sameness may turn out, according to a perfectly good definition, to be only approximate sameness.² And resistance to the conclusion that no two terms are exactly alike in meaning ought to be softened considerably by the recognition that some terms like "triangle" and "trilateral" are, through being interreplaceable in most compounds, very much alike in meaning.

Thus I think the second of Mr. Price's³ objections can be answered by saying that dictionary definitions are useful because they join expressions that are much alike in meaning—although the degree of likeness varies considerably. Mr. Price's first objection I cannot follow. He says that "glub" and "gloob" differ in meaning by my criterion because "glub" is not a "gloob" will be a glub description but not a gloob description. But I am dealing with names or predicates in a language. When nonsense syllables are incorporated like words in a phrase, the phrase itself is nonsense. Or in other words, if "glub" is not in the language then neither is "glub description".

Mr. Thomson says⁴ that two words are synonymous because they have the senses they have. This is much like saying that a city is north of another because of the locations they have; and it seems to me misleading and irrelevant. It obscures the fact that cities in quite other places are such that one is north of the other; and it appears to deny that we can define the predicate "is north of" in an appropriate and useful way without reference to the location of any particular city. Mr. Thomson seems to be objecting to all definition of general terms rather than

¹ "The Philosophical Denial of Sameness of Meaning", *ANALYSIS*, vol. 11 (1950), pp. 38-45.

² Mr. Wienpahl, I take it, in "More about the Denial of Sameness of Meaning"—*ANALYSIS*, vol. 12 (1951), p. 19-23—is making this same general point that clarification as well as conformity is required of a definition.

³ "A Note on Likeness of Meaning", *ANALYSIS*, vol. 11 (1950), pp. 18-19.

⁴ "Some Remarks on Synonymy", *ANALYSIS*, vol. 12 (1952), pp. 73-76.

pointing to any special difficulty about synonymy. Nor can I accept Mr. Thomson's argument that if I am willing to use "centaur picture" without being able to define it precisely, I should be equally willing to use "Platonic Idea of a centaur". The difference is that I do know some things to which the term "centaur picture" clearly applies and I don't know anything to which the term "Platonic Idea of a centaur" applies. I should be glad to have a full explication of "picture" in order to settle borderline cases; but I need an explanation of "Platonic Idea" before I can apply it at all.

Many questions have been raised about what constitutes a description.¹ No complete definition is needed. If the animal before us is clearly a polar bear, the question whether there are polar bears on our island is settled even though we neither know how to define "polar bear" nor are sure whether it applies to certain other animals. To show that two secondary extensions differ we need only a case in point. Now if we remember that we can perfectly well describe what is not actual or even possible, then "isosceles triangle", "triangle with angles totalling 110 degrees", and "triangle that is not a trilateral" are all triangle descriptions according to ordinary usage. In other cases, like that of "triangle that is not a triangle", direct appeal to ordinary usage may yield no firm decision. Then we must formulate rules that fit ordinary usage where it is clear and that can be projected to decide these doubtful cases. There is no one correct way of doing this, but a reasonable rule covering the present question runs as follows: Any phrase of the form "that is . . ." is both a description and a . . . description; and a not-a-soandso description is not a soandso description unless required to be by the first clause of this rule. Thus "triangle that is not a triangle" is both a triangle description and a not-a-triangle description, while "trilateral that is not a triangle" is a trilateral description and is not a triangle description. As explained in Section I, we may avoid all these complications about descriptions by choosing certain other compounds as our examples.

Mr. Clarke argues² that a compound such as "triangle description" ought to be ruled out on the ground that it implicitly mentions the word "triangle" in much the same way

¹ For example, by Mr. Church in the *Journal of Symbolic Logic*, vol. XV (1950), pp. 150-151. The various suggestions that Mr. Smullyan despatches so easily in " ϕ -Symbols"—*ANALYSIS*, vol. 11 (1951) pp. 69-72—are too far afield to have called for consideration in the first place. As my example of centaur-pictures and unicorn pictures was designed to show, we cannot define "P-picture" or "P-description" solely in terms of what "P" applies to.

² "Reflections on Likeness of Meaning," *Philosophical Studies*, vol. III (1952), pp. 9-13.

that "John is so-called . . ." implicitly mentions the word "John". A phrase implicitly mentions a term, in his view, if the expansion of the phrase explicitly mentions it. He would, of course, regard my example of "literal English triangle word" as even more obviously open to this criticism. Turning Mr. Clarke's own argument against him, one might well contend that the expansion of "expansion of" explicitly refers to synonymy and that his argument thus begs the whole question. But unlike Mr. Clarke, I am unwilling to rest any argument on the notion of *the expansion of* a phrase. Let us grant—overlooking the point about implicit reference to synonymy—that any given phrase can, so to speak, 'be rewritten' in various longer ways. Still, in the absence of any formal systematization, any of these longer phrases qualifies as well as any other as *an* expansion of the phrase in question. Now does Mr. Clarke exclude compounds having some expansion that mentions the term in question? Then he excludes all compounds; for even "white boat" can be rewritten "white thing to which 'boat' applies". Or does he exclude, rather, compounds of which every expansion applies to expressions containing the term in question? Then, since an expansion must obviously apply to just what the original compound applies to, he could have dispensed with all talk of expansions and simply ruled out compounds that apply to such expressions. Even so, the exclusion is ineffectual; for if it bars "triangle description" and "literal English triangle word", it does not bar "non-English triangle description" or "literal German triangle word", which serve the same purpose. Stronger prohibitions that readily suggest themselves likewise prove to be inadequate.

III

The reader may still feel that the compounds cited in deriving the conclusion that every two terms differ in meaning are somehow exceptional and trivial, and that a feasible way of ruling them out must eventually be found. This feeling I can understand; when a single form of compound has a different extension for every term, the fact that it has different extensions for two given terms is of no striking or special interest. Let us, then, simply exclude every compound for which the corresponding compounds of every two terms have differing extensions. We do not, indeed, thereby insure ourselves against the result that no two terms are synonymous, since for each two terms we may well be able to find corresponding compounds

having different extensions. But we honour the feeling or principle that the interesting differences between two terms are just those which are not shared by every two terms. The net change effected is not great, amounting merely to this : instead of saying that every two terms differ in meaning but that some may not differ in interesting ways, we say that two terms differ in meaning only if they differ in certain interesting or peculiar ways. Nevertheless, this way of putting the matter may alleviate some discomfort.

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